

Exhibit "B"

Part 1 of 10

Record of Decision

Transformation of the 2nd Brigade, 25th Infantry Division (Light) to a Stryker Brigade Combat Team in Hawai'i

Prepared for
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Office of the Secretary of the Army
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RECORD OF DECISION

Final Environmental Impact Statement for Transformation of the 2nd Brigade, 25th Infantry Division (Light) to a Stryker Brigade Combat Team in Hawai'i

1.0 Decision

We have reviewed the Final Environmental Impact Statement (Final EIS) for the Transformation of the 2nd Brigade, 25th Infantry Division (Light) [25th ID(L)] to a Stryker Brigade Combat Team. On behalf of the Army, we have decided to proceed with all facets of the Proposed Action, as summarized in Section 5.1 of this Record of Decision (ROD) and more fully described in Chapter 2 of the Final EIS. The Final EIS assessed potential environmental and socioeconomic impacts of the Proposed Action on the biological, physical, and cultural environment.

Under the Proposed Action, the 2nd Brigade will be converted to a Stryker Brigade Combat Team (SBCT) under the Army's efforts to incorporate future force capabilities into the Army's current force. Implementing the Proposed Action will require undertaking several distinct but coordinated actions and activities directly associated with transforming the 2nd Brigade. These various actions that make up the Proposed Action will include stationing personnel, fielding Stryker systems and other SBCT-specific materiel, building new facilities, acquiring new land and additional easements, and conducting SBCT-specific training.

2.0 Rationale for the Decision

Our decision to implement the Proposed Action is based on consideration of the analyses contained in the Final EIS, comments provided during formal public comment and review periods, and matters pertaining to Army-wide transformation, national security, and mission requirements. We have determined that the Proposed Action best satisfies the purpose and need for the Army's action and that it reflects a proper balance among competing factors, most notably statutory mission imperatives, environmental impacts, technical considerations, and all practicable means that will avoid or minimize environmental harm.

The Army recognizes that preferences among alternatives may be based on relevant factors, such as environmental, economic, and technical considerations, as well as the agency's mission; therefore, the agency's preferred alternative will not necessarily be the environmentally preferred alternative.¹ The Final EIS provides detailed evaluation of the Proposed Action and the Reduced Land Acquisition (RLA) and No Action Alternatives. Selection of any of these alternatives as being environmentally preferable takes into account numerous considerations; that is, the Proposed Action is inherently complex and multi-faceted, extending to unit transformation, training activities, multiple construction projects across a variety of sites, and environmental mitigation measures.

¹40 CFR 1505.2(b) and 32 CFR 651.45(j)(1).

After taking all of these facets into consideration, the No Action Alternative is the environmentally preferred alternative. Under the No Action Alternative, the Army would not undertake the proposed conversion of the 2nd Brigade to an SBCT in Hawai'i. The 2nd Brigade would retain its current force structure and equipment while continuing to train and operate as a conventional light infantry force. Three environmentally significant impacts, primarily due to Army training activities, would remain: noise at Schofield Barracks Military Reservation (SBMR); the threat of wildland fires to biological resources at SBMR and Pōhakuloa Training Area (PTA); and cumulative impacts from the threat of wildland fires to biological resources on the islands of O'ahu and Hawai'i. However, the No Action Alternative does not satisfy any aspects of the stated purpose and need, which are in furtherance of the Army's national defense mission.

We prefer the Proposed Action to the RLA Alternative for several reasons. While the environmental impacts of the Proposed Action and the RLA Alternative are virtually identical, the Proposed Action is superior to the RLA because constructing the multipurpose Qualification Training Range (QTR2) in the South Range Acquisition Area near the concentration of Soldiers at SBMR facilitates individual weapons qualification at the home station, which is consistent with Army training guidance. Because most Soldiers are stationed on O'ahu, it is more efficient to conduct individual weapons qualification training close to home station at SBMR. Individual qualification is conducted semi-annually and is required for all Soldiers, even those that are not assigned to units that routinely deploy to PTA. The Proposed Action assures adequate throughput capacity for conducting individual qualification on O'ahu. On the other hand, conducting individual weapons qualification training at a QTR2 at PTA results in greater logistical and safety issues from scheduling training and arranging transport of Soldiers and weapons to the Island of Hawai'i. The additional travel requirements would result in greater training costs and require Soldiers to spend even more time away from home station. If units are able to take advantage of scheduled deployments to PTA to accomplish individual weapons qualification, this may not increase training costs, but could result in even more time away from home station. Constructing QTR2 at PTA would pose conflicts with the use of Range 8 and the potential development of an SBCT-specific anti-armor and live-fire tracking range. Acquiring the full acreage in the South Range Acquisition Area (SRAA) partially cures the shortage of Army training lands in Hawai'i, provides a buffer to incompatible development along the southern border of SBMR, and provides some additional safety zones for Wheeler Army Airfield's (WAAF) runway. Additionally, based on The Nature Conservancy's comments, changes to the orientation of QTR2 have minimized the impact on access to the Honouliuli Preserve.

Therefore, we select the Proposed Action for implementation. We have fully considered the environmental impacts associated with the Proposed Action. Notwithstanding these impacts, we have decided to implement all facets of the Proposed Action because it best meets the purpose and need for this action and it is critical to achieving current and future national security objectives in U.S. Pacific Command's Area of Responsibility (AOR). This AOR is vital to the security of the United States and key allies. The AOR covers more than 50 percent of the earth's surface and traverses 16 time zones. It includes nearly 60 percent of the world's population living in 43 countries. The world's six largest armed forces operate within this AOR: Peoples Republic of China, United States, Russia, India, North Korea, and South

Korea. Nations within this AOR are parties to five of the seven worldwide U.S. mutual defense treaties. Additionally, approximately 35 percent of U.S. international trade is transacted within this AOR.

Consideration of essential national policy, specifically national security objectives in this AOR, was balanced along with other relevant factors. To successfully execute the Global War on Terrorism and ensure our nation's security, the Army must provide the Joint Force with relevant and ready capabilities and forces to support the National Security and Defense Strategies — a campaign-quality Army with joint and expeditionary mindset. The SBCT is one component of the Army's on-going effort to enhance capabilities in our current force to meet evolving requirements. Although SBCTs are highly deployable and subject to worldwide assignment, these enhanced units are strategically stationed within or near AORs deemed important to national security. Army transformation occurs within the larger context of continuous change brought about through the interaction of constantly evolving capabilities between current and future forces. Transforming the 2nd Brigade of the 25th ID(L) to an SBCT by implementing all facets of the Proposed Action will substantially enhance the 25th ID(L)'s ability to accomplish its mission in support of U.S. Pacific Command's theater strategy. This strategy is designed to accomplish three major objectives: In peacetime, to make conflicts and crises less likely; in times of crisis, to resolve specific situations on terms that advance U.S. interests; and in war, to win quickly and decisively, with a minimum loss of life and resources.

3.0 Background

In October 1999, the Secretary of the Army and the Chief of Staff of the Army articulated a vision for the Army to meet the challenges of the 21st century. The Army must become more strategically responsive and dominant at every point on the spectrum of military operations, ranging from intensive combat to peacekeeping duties and humanitarian missions.

The ROD for the Programmatic EIS documented the Army's decision to transform the 2nd Brigade, 25th ID(L) at Schofield Barracks, Hawai'i to an SBCT, subject to a site-specific analysis of the environmental impacts of implementing SBCT in Hawai'i. The Commanding General of the 25th ID(L) was charged with deciding how best to achieve that directive and provide for military training, readiness, and facility requirements to meet SBCT transformation needs, while enabling the current forces to continue carrying out their missions and giving due consideration to environmental factors. This decision is based on the results of the Final EIS and on consideration of all relevant factors, including mission, cost, technical factors, and environmental considerations. The Final EIS considered a reasonable range of alternatives, including several alternatives that involved transforming and/or training on the U.S. mainland. As discussed in Section 2.6 of the Final EIS, the mainland alternatives were not analyzed in detail because they did not meet the purpose and need of the Proposed Action. (Complete details on the Proposed Action are presented in Chapter 2 and Appendix D of the Final EIS.)

4.0 Purpose and Need

4.1 Purpose of the Proposed Action

The purpose of the Proposed Action is to assist the Army's transformation efforts by bringing the SBCT to operational capability and to provide realistic training in Hawai'i. Twenty-eight projects are proposed for the U.S. Army, Hawai'i (USARHAW) that will improve on the existing support structure and facilities to provide the necessary field training required for an SBCT. Reconfiguring maneuver areas, establishing combat training facilities more appropriate to the types of threats the Army expects to encounter, and strengthening infrastructure would ensure that SBCT's leaders and Soldiers would be prepared for the full spectrum of military operations.

4.2 Need for the Proposed Action

The need for transformation of the 2nd Brigade is to provide the nation with capabilities that meet current and evolving national defense requirements. As Army doctrine evolves, training and facilities must also change. The SBCT goal is to be able to deploy anywhere in the world and be prepared to carry out the Army's military mission within 96 hours of deployment from Hawai'i. While SBCT units will retain the mobility and flexibility of traditional Army light forces, they will incorporate the lethality and survivability of traditional Army heavy forces. They will be equipped with new vehicles, equipment, and communications technology to achieve their missions. Training must include a greater emphasis on Military Operations in Urban Terrain to prepare Soldiers for a variety of situations, such as resolving general urban unrest, infiltrating and clearing buildings, and fighting at close range. Training for these kinds of activities requires constructing new ranges and support facilities on O'ahu and the island of Hawai'i.

The 2nd Brigade in Hawai'i was selected to transform to an SBCT in the Programmatic EIS ROD based on several factors, which include the following:

- *Location of the 2nd Brigade within the Pacific Rim, a critical area of interest for the United States.* Stationing an SBCT in Hawai'i allows the U.S. military to rapidly respond to events in an area of increasing importance to national security. The goal of the Hawai'i SBCT would be to deploy a brigade anywhere within the Pacific Rim within 96 hours or to combine with other SBCT brigades or future forces to place a division anywhere in the Pacific Rim within five days, or five divisions within thirty days. There are two other SBCTs on the Pacific coast (in Washington State) and one proposed SBCT in Alaska to support deployment to the critically important Pacific Rim, while others will be in the eastern United States to support deployment to other geographic regions.
- *Composition and mission of the 2nd Brigade and the benefits of transforming to an SBCT.* The 2nd Brigade is already a light infantry unit, which executes full spectrum military missions in complex terrain. Hawai'i provides the terrain and conditions most likely to be encountered in the Pacific Rim. The enhancement of this unit to an SBCT

would allow this already light unit to be more mobile, lethal, and survivable under a greater variety of conditions.

- *Ease of deployment.* The SBCT would be in proximity to multiple airbases and seaports of suitable size.

5.0 Proposed Action and Alternatives

5.1 Proposed Action

Under the Proposed Action, the 2nd Brigade would be converted to an SBCT. Implementing the Proposed Action would require undertaking several distinct and coordinated actions and activities directly associated with transforming the 2nd Brigade. This would include fielding Stryker systems and SBCT-specific weapons, building new facilities, acquiring land and additional easements, and conducting SBCT-specific training. Table 1 lists the proposed projects for each alternative. Major elements of the SBCT include the following:

- Three Motorized Infantry Battalions, each composed of three Combined Arms Rifle Companies and a Headquarters Company;
- Reconnaissance, Surveillance, and Target Acquisition Squadron;
- Antitank Company;
- Field Artillery Battalion;
- Engineer Company;
- Brigade Support Battalion;
- Brigade Headquarters and Headquarters Company;
- Signal Company; and
- Military Intelligence Company.

Each major element of the SBCT is composed of a number of smaller units. Individual training activities often consist of section-, team-, squad-, and platoon-sized units operating in a dispersed but coordinated manner. Despite some changes in equipment, capability, and training doctrine, training activities are anticipated to be very similar to those currently conducted by light infantry brigades stationed on and training on O'ahu and the island of Hawai'i. However, the number of Soldiers is expected to increase by 810 and the total number of rounds to be fired by all Soldiers trained at USARHAW will increase by 25 percent. This would increase overall training throughput requirements, which would necessitate the construction and update of ranges and facilities to meet the SBCT training requirements. The addition of the Stryker and the need for increased mounted maneuver training require the acquisition of additional lands.

Table 1
SBCT Projects Overview

1391 Project #	SBCT Project Title	Location	Construction Commences (Fiscal Year¹)	Category
58143	Urban Assault Course and Training Facilities	Schofield	2006	Construction
57404	Virtual Fighting Training Facility	Schofield	2009+	Construction
56923	Range Control Facility	Schofield	2009+	Construction
58144	Battle Area Complex	Schofield	2005+	Construction
57421/ 58925	Motor Pool Maintenance Shops	Schofield	2005	Construction
57416	Tactical Vehicle Wash Facility	East Range	2005	Construction
N/A	Fixed Tactical Internet	Schofield	2005	Construction
55270	South Range Land Acquisition	Schofield	2004	Additional Land
57461	Qualification Training Range, QTR1	Schofield (M. Flats)	2004+	Construction
57462	Qualification Training Range, QTR2	Schofield (S. Range)	2005	Construction
57422	Multiple Deployment Facility	Schofield (Wheeler)	2005	Construction, Renovation
57405	Upgrade Airfield for C-130 Aircraft	Schofield (Wheeler)	2009+	Upgrade
58161	Land Easement/Construct Road, SB/Dillingham Military Reservation (DMR)	Dillingham	2009+	Construction
57415	Tactical Vehicle Wash Facility	Kahuku	2007	Construction
57305	Combined Arms Collective Training Facility	Kahuku	2005	Construction, Renovation
57406	Road Construction, Schofield to Helemanō	Helemanō	2005	Construction
57802	Land Easement, Schofield to Helemanō	Helemanō	2004	Additional Land
57197	Battle Area Complex	Pōhakuloa	2007	Construction
57183	Anti-armor Live-fire and Tracking Range	Pōhakuloa	2009+	Construction
58273	Construct Military Vehicle Trail, PTA- Kawaihae	Pōhakuloa	2009+	Construction
58273	Land Easement for Military Vehicle Trail, PTA-Kawaihae	Pōhakuloa	2009+	Additional Land
57417	Ammunition Storage	Pōhakuloa	2009+	Construction
57414	Tactical Vehicle Wash Facility	Pōhakuloa	2006	Construction
57411	West PTA Maneuver Training Area Land Acquisition	Pōhakuloa	2005	Additional Land
56994	Range Maintenance Facility	Pōhakuloa	2009+	Construction
57408	Runway Upgrade/Extension, Bradshaw AAF	Pōhakuloa	2009+	Renovation
N/A	Fixed Tactical Internet	Pōhakuloa	2005	Construction
N/A	Installation Information Infrastructure Architecture	Pōhakuloa	2005	Construction

Source: U.S. Army 2002a

¹Fiscal year is based on current program guidance, subject to change as a result of future funding availability.

After the publication of the Draft EIS, the Army announced plans for an enhancement package for SBCTs. The announced enhancements included an aviation task force, an increase from twelve to eighteen 155mm howitzers in the direct support artillery battalion, and improvements to command, control, communications, computer, and intelligence (C4I) assets. The announcements indicated that the aviation task force would include Comanche helicopters when the aircraft were ready for fielding. In February 2004, the Army determined that no further testing or fielding of Comanches would occur and canceled the Comanche program. The SBCT will train with aviation assets that currently exist in the 25th ID(L) aviation brigade and SBCT training will result in minor changes to training, primarily some increased aviation training over the West PTA Acquisition Area (WPAA) in support of units training in that area. The Final EIS analyzed the impacts of the increased aviation training over WPAA and those impacts were determined to be minimal. The Draft EIS analyzed the impacts of twelve 155mm howitzers, a change from the eighteen 105mm howitzers currently in the direct support artillery battalion for 2nd Brigade. The addition of another six 155mm howitzers was analyzed in the Final EIS and resulted in minimal changes to noise impacts and no change in the overall determination of effect. The C4I improvements are not expected to have any impacts to the environment.

Overall, the Army determined that the enhancements are within the original scope of the Proposed Action, as described in the Draft EIS, and that they are minor and did not require a supplemental Draft EIS.

An evaluation of training facilities shows that they are not fully adequate for training an SBCT (Nakata Planning Group 2002a). Under the Proposed Action, training capabilities will be enhanced as part of transforming the 2nd Brigade to an SBCT. The Army's proposed changes to training will rectify training resource shortfalls for SBCT units and will reorient resources to meet evolving mission-related requirements. In order to meet present and future missions, USARHAW units must have enlarged maneuver areas, modernized training facilities, and other support facilities, such as infrastructure and telecommunications.

In selecting specific construction projects to meet the training shortfall for SBCT and to minimize costs and impacts to the environment and communities, planners attempted to first use existing USARHAW lands and ranges, where possible, to upgrade existing ranges and facilities, to build new ranges on existing training areas, and, if necessary, to acquire new training lands. Once project alternatives were developed, they were further evaluated and selected based on the following factors: the extent to which they provided mission support; the extent to which they minimized environmental impacts and contributed to environmental stewardship; their economic feasibility; and the extent to which they increased training productivity. Each final site location was further adjusted as necessary to avoid or minimize impacts to natural and cultural resources.

5.2 Alternatives

5.2.1 Reduced Land Acquisition Alternative

This alternative is identical to the Proposed Action, except that QTR2 would be moved to PTA and land acquisition at the SRAA would be reduced (Figure ES-5). This alternative would involve downsizing the proposed SRAA by approximately 93 percent, from 1,402 acres (5,666 hectares) to 100 acres (40.5 hectares). The 100 acres would be necessary within the SRAA for constructing the proposed SBCT Motor Pool because the motor pool must be located close to SBMR where the Soldiers are based, and there is no space available for building this facility at SBMR or WAAF. This would require that an expanded version of QTR2 be constructed at PTA rather than at the home station, SBMR. This is contrary to current training of the 25th Infantry Division, which is based on troops completing qualification training at SBMR before deploying to PTA. The larger exercises conducted at PTA are more effective if each Soldier is fully qualified at SBMR before deploying to PTA. However, the length of deployment at PTA could be extended to allow training at QTR2 before other training is conducted at PTA. Soldiers not able to qualify during deployment would potentially have to return to PTA to complete a substantial portion of their small arms qualifications. The best available site for the proposed QTR2 at PTA is on the site of the current Range 8. This location falls within the overall boundaries of the anti-armor and live-fire tracking range (AALFTR), also proposed for this site, meaning that both ranges could not be used for live-fire at the same time. An expanded version of QTR2, to include sniper and machine gun training, as well as pistol and M16, would be constructed at PTA, overlying the proposed AALFTR, so no new area would need to be used or ordnance impact area created. Although the purpose and need for USARHAW transformation would still be fulfilled, it would not be as efficient, and in some circumstances not every Soldier would become qualified on individual weapons before arriving at PTA. This would detract from the effectiveness of the large-unit training conducted there and would require additional training.

5.2.2 No Action

Under the No Action Alternative, the Army would not undertake the proposed conversion of the 2nd Brigade to an SBCT in Hawai'i and therefore would not meet the purpose and need for transforming the USARHAW 2nd Brigade, 25th ID(L). The 2nd Brigade would continue to train and operate as a conventional light infantry force.

5.2.3 Alternatives Considered But Eliminated from Detailed Analysis

Several factors shape alternatives available to USARHAW. First, any viable alternative must meet the purpose of and need for the action by helping to bring the Army's current force to operational capability and by providing realistic field training in Hawai'i while providing the nation with capabilities that meet current and evolving national defense requirements. Alternatives must be practical and feasible; that is, they must be capable of being implemented by the Army or another agency, must be technically feasible, and must not require commitment of resources that cannot practically be obtained. In addition, in framing alternatives, USARHAW took into consideration information and suggestions submitted by

individuals, organizations, and public agencies. Finally, each alternative, with the exception of the No Action Alternative, must meet the training needs required for an SBCT.

The following alternatives were considered but eliminated from detailed analysis because they did not meet one or more of the requirements outlined above. A detailed explanation of why these alternatives were eliminated from detailed analysis is contained in Section 2.6, pages 2-46 through 2-54, of the Final EIS.

- Transform a different brigade at another location;
- Transform with existing facilities (no new construction or land acquisition);
- Transform with maneuver training on a continental U.S. installation (includes maneuver live-fire training);
- Transform using other existing military facilities in Hawai'i (e.g., Marine or Navy bases);
- Transform by moving all training to PTA;
- Purchase maneuver lands at Pu'u Pā on the island of Hawai'i; and
- Purchase maneuver lands at Lualualei on the island of O'ahu.

6.0 Public Involvement

By providing a means for open communication between the Army and the public, NEPA promotes better decision-making. Those having a potential interest in the Proposed Action, including minority, low-income, or disadvantaged individuals, Native Hawaiians, and other individuals, organizations, and agencies, were notified and invited to participate in the scoping and environmental impact analysis process.

The Council on Environmental Quality (CEQ) regulations, Army Regulations, and 32 Code of Federal Regulations (CFR) 651, guide public participation opportunities. These requirements include issuing in the *Federal Register* a notice of intent (NOI) to prepare an EIS², initiating a public scoping process and a minimum 45-day public review and comment period for the Draft EIS, and publishing the Final EIS, accompanied by a 30-day waiting period before a final decision is made and a ROD is issued.

Following publication of the NOI, public notices were published in the major newspapers on the island of Hawai'i and on O'ahu announcing the time and location of seven public scoping meetings to solicit input and to obtain comments on the range of the EIS. In addition, the scoping meetings were announced in the April 8, 2002, issue of *The Environmental Notice*, published by the State of Hawai'i, Department of Health, Office of Environmental Quality Control (OEQC). The public scoping period began on April 8, 2002. Based on public comment, the scoping period was extended by 30 days and ended on

²The notice of intent for this EIS was published in the *Federal Register*, March 4, 2002 (76 FR 9717).

June 15, 2002. Scoping meetings were held between April 16 and 30, 2002, at two locations on the island of Hawai'i and at five locations on O'ahu. A total of 283 people attended the seven meetings. In addition to oral comments received at the public scoping meetings, the Army also received written comments in the form of e-mails, faxes, letters, and form letters, comments via telephone, and comments at separate information meetings requested by groups and organizations.

The Commanding General, 25th ID(L) and USARHAW approved the Draft EIS for public review and it was distributed to elected officials, regulatory agencies, and members of the public on October 3, 2003. The availability of this document was announced in the *Federal Register*³, and a 45-day public comment period followed to provide the public with the opportunity to comment on the findings of the EIS.

The publication of the Draft EIS and the opening of the public comment period was announced with both legal and display advertisements in the *Hawai'i Tribune-Herald*, *West Hawai'i Today*, *The Honolulu Advertiser*, *Honolulu Star-Bulletin*, *Midweek*, and OEQC's *The Environmental Notice*. Six public meetings to receive comments on the Draft EIS were held in Honolulu, Wahiawā, Wai'anae, Kahuku, Waikoloa, and Hilo. On October 31, 2003, the Army made a decision to extend the public comment period on the Draft EIS until January 3, 2004.

Comments received during the public comment period included those from federal, state, and local agencies, non-governmental organizations, businesses, and individuals. Over 600 unique commenters participated in the public review of the Draft EIS, and their comments and the Army's responses are provided in Appendix P of the Final EIS.

The Army published the Notice of Availability (NOA) in the *Federal Register* on May 24, 2004, and the U.S. Environmental Protection Agency published the NOA on June 4, 2004. Agencies and members of the public that submitted oral or written comments on the Draft EIS were informed of how the Army responded to their comments. During the Final EIS 30-day waiting period, additional comments were submitted by agencies and members of the public. However, the comments did not provide any new or additional information requiring modification to the Final EIS, which would have altered this decision making process. The comments and any Army responses have been added to the administrative record.

7.0 Environmental and Socioeconomic Consequences

Table 2 summarizes the impacts to environmental and socioeconomic resources at each installation for the alternatives. The summary of impact levels to environmental and socioeconomic resources is based on the analysis of the Proposed Action, RLA Alternative, and the No Action Alternative for each installation (SBMR, Dillingham Military Reservation [DMR], Kahuku Training Area [KTA]/Kawailoa Training Area [KLOA], and PTA) described in Chapter 4 in the Final EIS. The Final EIS discussed installation-specific

³The Notice of Availability (NOA) for the Draft EIS was published in the *Federal Register* by the U.S. Environmental Protection Agency (EPA) on September 29, 2003.

environmental conditions for each of the project areas and the potential environmental impacts of the Proposed Action, RLA Alternative, and No Action Alternative are identified. Mitigation measures are identified for any impacts determined to be significant.

Beneficial impacts are identified where applicable. Beneficial impacts include, but are not limited to, a boost to the economy associated with construction and mitigation activities and improved public services and utilities. There may also be both adverse and beneficial impacts within a single resource category; for instance, a project could interfere with a preexisting land use such as agriculture (an adverse impact), while expanding public access to recreational resources (a beneficial impact).

Table 2
Summary of Impact Levels from the Proposed Action, Reduced Land Acquisition, and No Action

Impact Issue	SBMR			DMR			KTA/KLOA			PTA			Project-Wide Impacts		
	PA	RLA	NA	PA	RLA	NA	PA	RLA	NA	PA	RLA	NA	PA	RLA	NA
Land use/recreation	⊗	⊙	○	⊙	⊙	○	⊗/○	⊗/○	○/○	⊙+	⊙+	○	⊗+	⊗+	○
Visual resources	⊙	⊙	○	⊙	⊙	○	⊙/○	⊙/○	○/○	⊙	⊙	○	⊙	⊙	○
Air space	○	○	○	○	○	○	○/○	○/○	○/○	○	○	○	○	○	○
Air quality	⊙	⊙	○	⊙	⊙	○	⊙/○	⊙/○	○/○	⊗	⊗	○	⊗	⊗	○
Noise	⊗*	⊗*	⊗	⊙	⊙	○	⊙/○	⊙/○	○/○	⊙	⊙	○	⊗	⊗	⊗
Traffic	⊙	⊙	○	⊙	⊙	○	⊙/○	⊙/○	○/○	⊙+	⊙+	○	⊙+	⊙+	○
Water resources	⊙	⊙	○	⊙	⊙	○	⊙/○	⊙/○	○/○	⊙	⊙	○	⊙	⊙	○
Geology and soils	⊗	⊙	○	⊗	⊗	○	⊗/○	⊗/○	○/○	⊗	⊗	○	⊗	⊗	○
Biological resources	⊗	⊗	⊗	⊙	⊙	○	⊗/○	⊗/○	⊗/○	⊗	⊗	⊗	⊗	⊗	⊗
Cultural resources	⊗	⊗	○	⊗	⊗	○	⊗/○	⊗/○	○/○	⊗	⊗	○	⊗	⊗	○
Human health and safety hazards	⊙	⊙	○	⊙	⊙	○	⊙/○	⊙/○	○/○	⊙	⊙	○	⊙	⊙	○
Socioeconomics	⊙+	⊙+	○	⊙+	⊙+	○	⊙+/○	⊙+/○	○/○	⊙+	⊙+	○	⊙+	⊙+	○
Utilities	⊙	⊙	○	⊙+	⊙+	○	⊙+/○	⊙+/○	○/○	⊙+	⊙+	○	⊙+	⊙+	○

This table summarizes project-wide impacts. For installation-specific impacts see Chapters 5 through 8 in the Final EIS. In cases when there would be both beneficial and adverse impacts, both are shown on this table. Mitigation measures would only apply to adverse impacts. The PA and RLA for SBMR would have a minor increase in noise impacts over the NA. The determination of significance is based on existing NA levels.

LEGEND:

PA = Proposed Action	⊗ = Significant but mitigable to less than significant impact
RLA = Reduced Land Acquisition	⊙ = Less than significant
NA = No Action	○ = No impact
⊗ = Significant impact	+ = Beneficial impact
	N/A = Not applicable

Tables ES-6 and ES-7 from the Final EIS, which provide more detailed summaries of project-specific impacts under the Proposed Action and Reduced Land Acquisition Alternative, respectively, are hereby incorporated by reference into this ROD.

8.0 Cumulative Impacts

CEQ regulations implementing NEPA require that the cumulative impacts of a proposed action be assessed. Army Regulations also require that cumulative actions, when viewed with other proposed actions that have cumulatively significant impacts, be discussed in the same impact statement. As discussed in Chapter 9 of the Final EIS, direct and cumulative impacts should be viewed together to determine the full impacts from each alternative identified in Chapter 2 of the Final EIS. There are different analytical methods for determining significance and the region of influence (ROI) is often larger for cumulative impacts than that of direct and indirect impacts.⁴ Also, the Final EIS identifies significant direct impacts for certain resources while finding that there are no significant cumulative impacts for the same resource. This difference is normally because of the different geographical and/or temporal contexts involved with measuring direct and cumulative impacts. This Final EIS used a variety of methods, depending on the resource area, to determine cumulative socioeconomic and environmental effects. Table 3 provides a summary of cumulative environmental impacts identified for this project.

Table 3
Summary of Potential Cumulative Impacts

Resource Area	Proposed Action	Reduced Land Acquisition	No Action
Land use/recreation	⊗	⊗	○
Visual resources	⊙	⊙	○
Airspace	⊙	⊙	○
Air quality	⊙	⊙	○
Noise	⊙	⊙	○
Traffic	⊙	⊙	○
Water resources	⊗	⊗	○
Geologic, soils, and seismicity	⊙	⊙	○
Biological resources	⊗	⊗	⊗
Cultural resources	⊗	⊗	⊙
Human health and safety hazards	⊗	⊗	⊗
Socioeconomic and environmental justice	⊗	⊗	○
Public service and utilities	⊙	⊙	○

In cases when there would be both beneficial and adverse impacts, both are shown on this table. Mitigation measures would only apply to adverse impacts.

LEGEND:

⊗ = Significant ⊙ = Less than significant + = Beneficial impact
 ⊗ = Significant but mitigable to less than significant ○ = No impact N/A = Not applicable

Methods for gathering and assessing data regarding cumulative impacts include interviews, use of checklists, trends analysis, and forecasting. In general, past, present, and reasonably foreseeable future projects are assessed by resource area. These projects, which are listed in Chapter 9, Tables 9-1 and 9-2, in the Final EIS are sponsored by the U.S. Army, other

⁴ Council on Environmental Quality 1997, Considering Cumulative Effects Under the National Environmental Policy Act, January 1997.

federal and state agencies, or private entities, and include 32 projects on O'ahu, 12 projects on Hawai'i, and five projects that include both islands.

9.0 Final EIS Errata

Below is a list of corrections to the SBCT Final EIS dated May 2004.

- Throughout the SBCT Final EIS there is reference to the SBCT as part of the "interim force". Since the Draft EIS was published, the Army has changed the terminology for Army transformation and removed the "interim force" phase. The phases are "current force" and "future force" with SBCT as part of the transition between phases.
- Executive Summary, Page ES-51: The 2nd paragraph should read: "Cumulative impacts from the Proposed Action and the Reduced Land Acquisition Alternative (RLA) would occur in all resource areas. Significant cumulative impacts from the Proposed Action and the RLA would occur in the following resource areas: Land use, biological resources, cultural resources, water quality, human health and safety hazards, and socioeconomics."
- Hilo Public Meeting Transcript, Page 118, Line 25 and Testimony of Dr. David Heaukulani M5-1, Line 7: The transcript reads: "The culture experts on the environmental staff of U.S. Army, Hawai'i recovered several iwi, ancient Hawaiian warrior spears...." The correct Hawaiian word for spear is 'ihe' and was apparently mistranscribed. Dr. Heaukulani informed the Army of this error in a comment letter after the Final EIS was distributed.
- Mitigation for wildfire impacts pages ES-64, 4-89, 5-224, 6-121, and 7-136: The Regulatory and administrative mitigation for wildfire impacts, as stated in the noted sections of the Final EIS, state in part: "The IWFMP for Pöhakuloa and O'ahu Training Areas was updated on [sic] October 2003. The Army will fully implement this plan for all existing and new training areas to reduce the impacts associated with wildland fires...." Also included should be the following, as stated on page 8-223: "The IWFMP, which includes the fire management areas and standing operating procedures, would be updated to address proposed activities along the trail. These updates will be completed before activities associated with the Proposed Action commence...."

10.0 Other Considerations

10.1 Significant Unavoidable Adverse Impacts

An EIS must describe any significant unavoidable impacts for which either no mitigation or only partial mitigation is feasible. Significant and unavoidable impacts from the Proposed Action are as follows:

- Unauthorized recreational access at KTA will be adversely affected by additional fencing and signs restricting access, which is necessary due to the proposed short-range training ammunition (SRTA) live-fire use of the area;
- Air quality impacts from wind erosion of areas previously disturbed by off-road vehicle maneuver activity (where vegetation has been decreased, resulting in increased wind erosion) at PTA;
- Noise impacts from ordnance use at SBMR;
- Soil loss from training activities at SBMR, DMR, KTA, and PTA;
- Biological impacts from fire on sensitive species and habitat at SBMR, KTA and PTA;
- Biological impacts from off-road training activities on sensitive species and habitat at PTA;
- Cultural resource impacts to historic buildings at KTA (the Nike Missile Site) and PTA (Quonset huts at PTA Base Camp);
- Cultural resource impacts to archaeological resources from range and facility construction at PTA;
- Cultural resource impacts to archaeological resources from training activities at DMR and PTA;
- Cultural resource impacts to Areas of Traditional Importance at SBMR, DMR, and PTA;
- Cumulative impacts to land use;
- Cumulative impacts to biological resources;
- Cumulative impacts to cultural resources;
- Cumulative impacts to human health and safety hazards; and,
- Environmental justice impacts to Areas of Traditional Importance at SBMR, DMR, and PTA.

10.2 Relationship Between Local Short-Term Uses of the Environment and Long-Term Productivity

NEPA requires that an EIS include a consideration of the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity.

Construction activities associated with the proposed projects are short-term and temporary. All significant construction impacts will be mitigated where practicable under the constraints of public safety and the military mission. Short-term damage to the environment relating to construction includes direct and indirect loss of habitat and damage to sensitive species, loss of nonrenewable cultural resources, emissions impacts to air quality, and surface water quality impacts. Long-term environmental damage includes loss of farmland regulated under

the Farmland Protection Policy Act (FPPA), impacts to soil and water quality, impacts to habitat and wildlife from training activities, erosion, and wildfires, air quality impacts from wind erosion due to training activities, and potential damage to cultural resources in the future.

The conversion of farmland to military use at PTA and SBMR could affect long-term agricultural productivity in Hawai'i. Therefore, there would be some adverse impacts to long-term productivity as a result of the Proposed Action, but regional socioeconomic impacts are not expected to be significant.

Long-term productivity would be improved by replacing inadequate and inefficient facilities at SBMR and KTA with modern fuel-efficient buildings designed to reduce long-term reliance on nonrenewable fuel sources. Such replacement would also remove workplace hazards to Army staff, such as lead-based paint and asbestos-containing material. Infrastructure upgrades (such as communications and power systems) associated with the Proposed Action would result in longer life of these facilities and fewer expenses in maintaining and repairing such facilities. New facilities, such as the vehicle washes, would be designed to reduce the spread of invasive species and would use recycled water, and other facilities, such as select Fixed Tactical Internet (FTI) sites, may be designed to use solar power, thus minimizing the project's long-term energy requirements.

The long-term productivity of the Proposed Action is based on the Army's ability to transform its forces to continue to provide relevant and ready forces in support of the Global War on Terrorism and national security requirements. Any measurement of long-term productivity in this context must recognize the overriding importance of national defense and the Army's obligation to adapt to changing national security needs. While the Army will take whatever actions are required by law and those that are reasonable and practicable to preserve and protect the natural environment under its stewardship, the necessity of national defense requires the Army to provide the nation with capabilities that meet current and evolving national defense requirements. The Proposed Action is designed to meet these goals and further the security and welfare of the U.S., its residents, and its natural environment.

10.3 Irreversible and Irretrievable Commitments of Resources

NEPA requires that an EIS analyze the extent to which the Proposed Action's primary and secondary effects would commit nonrenewable resources to uses that future generations would be unable to reverse.

Implementing the Proposed Action or RLA Alternative would require commitments of both renewable and nonrenewable energy and material resources for demolishing inadequate facilities at SBMR and PTA; for constructing FTI antennas, proposed ranges, and support facilities at SBMR, DMR, KTA, WAAF, and PTA; and for constructing Dillingham, Helemanō and PTA Military Vehicle Trails. Material resources that would be used include wood, concrete, metals, asphalt and other petroleum products, and nonrenewable energy would be used for the construction activities. This temporary energy expenditure would

occur over the short term and would be irreversible once construction is completed. Additionally, further review has indicated that maneuver training at the WPAA may result in an irretrievable commitment of soil resources by loss through erosion of soils that support sensitive plant species and habitat.

Other nonrenewable resources would be used during SBCT training, such as the fuel used by Strykers and other vehicles in maneuvers and troop convoys; the water, power, and other resources necessary to maintain and operate the new military vehicle trails and new training facilities at SBMR, KTA, and PTA; and the increase in local resources required to support the additional military personnel and their families.

11.0 Mitigation Measures

11.1 Summary

Mitigation actions are expected to reduce, avoid, or compensate for most adverse effects. Subject to the availability of funds⁵, the Army shall take all necessary steps to implement the mitigation and monitoring measures listed in Table ES-22, pages ES-56 through ES-65, of the Final EIS, which is hereby incorporated by reference into this ROD. These mitigation measures, including regulatory and administrative requirements, will help substantially reduce significant impacts to affected resources or will provide a substantial benefit to the affected resources with minimal costs. The table does not include those measures that are considered standard operating procedures and best management practices, which will be integrated into and implemented as part of the proposed projects. The table also describes the benefits of a given mitigation measure.

In a letter dated June 28, 2004, The Nature Conservancy proposed additional mitigation measures to reduce potential impacts to recreational use and management of the Honouliuli Preserve. The Army has determined that the following mitigation measures will be implemented in addition to those measures defined in Table ES-22 of the Final EIS.

- (a) The Army, in collaboration with The Nature Conservancy, shall develop and implement a habitat management plan for the approximately 110-acre parcel that will be part of QTR2 in the South Range Acquisition Area, currently managed by The Nature Conservancy. The management plan shall include, amongst other things, a feral pig control strategy and a license agreement in favor to The Nature Conservancy to provide management assistance in the area under mutually acceptable conditions, for a term not shorter than the length of the lease The Nature Conservancy has with the Campbell Estate, including any future extensions for the remainder of Honouliuli Preserve.

⁵ A key provision of the Anti-Deficiency Act (31 U.S.C. 1341 (a)(1)), provides that an officer or employee of the United States Government may not (a) make or authorize an expenditure or obligation exceeding an amount available in an appropriation or fund for the expenditure or obligation or (b) involve the government in a contract or obligation for the payment of money before an appropriation is made unless authorized by law.

(b) The Army shall involve The Nature Conservancy and the State of Hawaii Department of Land and Natural Resources in reviewing and commenting upon future drafts of the Integrated Wildland Fire Management Plan – O`ahu and Pōhakuloa Training Areas (IWFMP). The Nature Conservancy and the State of Hawaii Department of Land and Natural Resources' comments shall be addressed in the plan to the extent possible. The Army shall undertake an initial review and update the IWFMP no later than July 30, 2005.

All regulatory requirements will be implemented in their entirety. Implementation and monitoring plans discussed in the mitigation table will be developed and implemented within 365 days of the ROD signing, unless otherwise identified. All implementation plans shall define the goal and objective of the plan and shall include status report due dates, monitoring timeframes and thresholds, and contingency measures to ensure the plan meets these defined goal and objectives. The mitigation enforcement and effectiveness-monitoring program will be consistent with the guidance at 32 CFR Part 651, Appendix C.

The mitigation and monitoring measures adopted in this ROD reflect all practicable means that will avoid or minimize environmental harm. Combined with existing environmental stewardship measures, full implementation of the measures will aid in avoiding, minimizing, reducing or rectifying adverse effects over time to land use and recreation, visual resources, air quality, noise, traffic, water resources, geology, soils and seismicity, biological resources, cultural resources, human health and safety, and socioeconomic and environmental justice.

11.2 Funding

USARHAW shall submit timely annual funding requests for each mitigation and monitoring measure requiring allocation of budget resources. The U.S. Army, Pacific and the Headquarters, Installation Management Agency shall evaluate and validate funding requests and shall provide the necessary funds to USARHAW for executing the mitigation and monitoring measures.

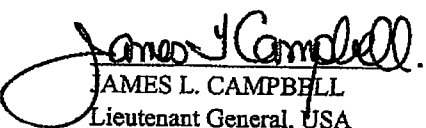
12.0 Point of Contact

Questions about this decision may be directed to Mr. Ron Borne, Transformation Manager, U.S. Army Garrison, Hawai'i, 2nd Floor, Bldg. 105, 572 Santos Dumont Avenue, Wheeler AAF, HI 96857-5013. (808) 656-0255.

DEPARTMENT OF THE ARMY
UNITED STATES ARMY PACIFIC COMMAND

FINAL ENVIRONMENTAL IMPACT STATEMENT
RECORD OF DECISION
TRANSFORMATION OF U.S. ARMY HAWAII

Reviewed and Approved by:

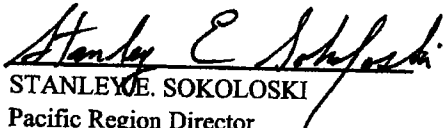

JAMES L. CAMPBELL
Lieutenant General, USA
U.S. Army, Pacific, Commanding

7 Jul 04.
Date

DEPARTMENT OF THE ARMY
UNITED STATES ARMY INSTALLATION MANAGEMENT AGENCY
PACIFIC REGION OFFICE

FINAL ENVIRONMENTAL IMPACT STATEMENT
RECORD OF DECISION
TRANSFORMATION OF U.S. ARMY HAWAI'I

Reviewed and Approved by:


STANLEY E. SOKOLOSKI
Pacific Region Director
U.S. Army Installation Management Agency

06 JUL 2004
Date

RECORD OF DECISION
TRANSFORMATION OF THE 2ND BRIGADE, 25TH INFANTRY DIVISION (LIGHT) IN HAWAII

U.S. Army Garrison, Hawai'i



HOWARD Z. KILLIAN

Colonel, USA

U.S. Army Garrison, Hawai'i, Commanding

7 Jun 04
Date

BIOLOGICAL OPINION
of the
U.S. FISH AND WILDLIFE SERVICE
for
ROUTINE MILITARY TRAINING AND TRANSFORMATION
of the
2ND BRIGADE 25TH INFANTRY DIVISION (Light)
U.S. ARMY INSTALLATIONS
ISLAND OF HAWAII



Haplostachys haplostachya

December 23, 2003
(1-2-2003-F-02)

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and Strykers within palila critical habitat and assess the efficacy of the buffer in minimizing impacts adjacent to critical habitat.

Trampling

Although off-road Stryker maneuvers are not allowed in palila critical habitat, inadvertent intrusion by Strykers into this area is possible, especially in the Stryker maneuver areas along the southern border of Palila Critical Habitat Area B (see Figure 2). Even accidental off-road driving within critical habitat could result in significant damage to mamane/naio woodland habitat. The 75-foot buffer between the Stryker maneuver areas and the southern border of Critical Habitat Area B will protect against accidental vehicle egress into critical habitat. The coordinates of this area will be added to the on-board navigation system of all Strykers used at PTA. If this method is ineffective at keeping vehicles out of the buffer area, the buffer boundary will be demarcated using some form of visible demarkation such as Seibert stakes placed along the buffer edge to delineate the palila critical habitat boundary.

Habitat Degradation

Currently, mamane and naio trees are declining in overall health and vigor, particularly recruitment rate, within palila critical habitat on PTA (S. Gleason, pers. comm. 2003). The reason for this decline is unknown. Several factors could be contributing to this habitat degradation and include ungulate browsing, military training, recent drought conditions, mamane seed predation by rodents, as well as the possible introduction of a parasite or pathogen of mamane.

A study will be developed and implemented to address the habitat degradation in palila critical habitat on PTA. The Implementation Team will review the issue, develop a study, including determination of the appropriate methodology, time frame, and participants for this study. Based on the results of this study, the Implementation Team will devise a strategy to combat the problem.

Summary

Adverse impacts to palila critical habitat south of the planned realigned Saddle Road from Transformation training include an increased risk of fire, invasion of non-native plants, dust, trampling, and possibly habitat degradation. These adverse impacts will be offset by restrictions on activities within critical habitat (see Appendix B), the implementation of the WFMP and adherence to existing fire risk reduction measures, use of vehicle wash racks, and establishment of a 75-meter buffer along the southern boundary of Palila Critical Habitat Area B. These measures will reduce the training threat to palila critical habitat. Fencing and ungulate removal elsewhere on PTA will also improve mamane-naio habitat for palila outside of critical habitat.

EFFECTS OF THE ACTION ON HAWAIIAN HOARY BATS

Activities that could affect Hawaiian hoary bats in the action area include live-fire and maneuver exercises, and aviation training. Current training restricts vehicle use to established roads, trails, and designated or approved firing positions. Based on the limited information available, Hawaiian

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control and management of wildfire, erosion, dust, and non-native species (*i.e.*, invasive plants, small mammals, invertebrates, and feral ungulates), as well as propagation and outplanting of native plants. Potential adverse impacts to bat habitat will be offset as a result of the Army's proposed general minimization measures such as fencing and removing ungulates from an additional 9,307 hectares (23,000 acres). These proposed measures will enhance the woodland and shrubland habitats which will provide additional roosting and foraging habitat for bats.

The greatest benefit of Army minimization measures to Hawaiian hoary bats will result from the construction and maintenance of fence units to control the adverse effects of feral ungulates on native vegetation. The Army also intends to survey the fence sites for federally listed species. The fence units (including fenced portions of the Kipuka Alala) will enhance the survival and regeneration of approximately 6,953 hectares (17,180 acres) of treeland vegetation providing potential available roosting habitat for bats. This amount represents about 35 percent of the total treeland area of PTA proper (excluding the Keamuku Parcel) that will be protected within fence units. In addition, approximately 1,369 hectares (3,382 acres) of other palila critical habitat areas are unfenced but receive varying degrees of protection through training restrictions.

The Army's WFMP includes a Fire Danger Rating System and a Wildfire Prevention Analysis to prioritize areas for pre-suppression funding and implementation. Five priority pre-suppression areas, or Fire Management Areas, are designated through the establishment and annual maintenance of fire breaks and fuel breaks (fuel management corridors). All Standard Operating Procedures to minimize training impacts will be reviewed for SBCT Transformation, and the PTA Environmental Office will review all training plans for potential impacts to listed species. In addition, the PTA Implementation Team will develop and implement a PTA Implementation Plan, although the Army has not proposed any specific measures to reduce threats to the Hawaiian hoary bat. Finally, the Army will reinitiate consultation with the Service each time fire affects lands beyond the action area.

Summary

The Service anticipates incidental take of Hawaiian hoary bats will be difficult to detect and quantify. Individuals are small and cryptic, and roost solitarily in tree foliage, so finding dead or injured bats is unlikely. The Service does not consider inspecting individual standing or downed trees as a practical survey method and does not recommend it as a means to determine incidental take (Service 2000). Monitoring to determine the presence of individual bats over an extensive area is not feasible either for solitary, tree-roosting bats using current technology (O'Shea and Bogan 2000). However, the level of adverse impacts can be anticipated by the area of suitable habitat affected. These impacts will be offset by the construction of additional fence units that will remove the ongoing browsing pressure from ungulates and allow for natural recruitment of treeland vegetation, and by implementation of the WFMP. (The total amount of habitat loss shown in Table 5, as indirectly measured by impacted treeland roosting habitat, does not account for the future reduction in habitat loss anticipated to result from WFMP implementation.) The Service considers the use of potential available habitat to indirectly measure project effects on the

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Hawaiian hoary bat as a reasonable approach to conservatively estimate the range of a species in an area when extensive surveys have not been conducted (Service 2000). The validity of using habitat measures is corroborated by the documented presence of Hawaiian hoary bats in several locations on PTA throughout the year.

The direct and indirect effects of SBCT Transformation are expected to result in a cumulative loss of the available roosting habitat for Hawaiian hoary bats in the Impact Area and off-road maneuver area, due to habitat destruction, degradation, and fragmentation. There is also the possibility that treeland roosting habitat could be lost outside of the Impact Area but the risk of this loss will be reduced by the WFMP. The severity of these effects on Hawaiian hoary bats would largely depend upon the frequency, intensity, location, and extent of wildfire, live-fire, and dismounted maneuvers that would occur repeatedly in the same areas. The ongoing adverse effects of roosting habitat loss would accumulate over time with the continuation of military training in the action area. The magnitude of direct and indirect effects of habitat loss (particularly of roosting habitat), however, and the number of bats actually injured or killed, is unknown. It is our biological opinion that all direct and indirect impacts of the proposed action, when considered over the entire PTA/Keamuku Parcel action area, would be of concern over time without the implementation of minimization measures.

The Service analyzes the effects of the proposed action based on the assumption that the Army's existing and proposed minimization measures will be implemented to offset project-induced impacts to listed species. These measures will only partially offset the negative effects of military training and wildfire on bats. Neither the Routine nor the Transformation Biological Assessments propose specific measures or guidelines to address potential impacts to bats or their habitat. The Army also proposes no monitoring protocols to identify the presence of bats in particular habitat types, no procedures to protect bats from direct harm or harassment, and no reforestation is specifically identified to enhance or restore bat roosting habitat. However, the proposed fencing activities will remove the ongoing browsing pressure from ungulates and allow for natural recruitment of damaged treeland vegetation. In addition, implementation of the WFMP will reduce the frequency, intensity, and size of fires on PTA outside the Impact Area. Consequently, adverse impacts to the Hawaiian hoary bat associated with Army actions will be minimized and offset by fencing, ungulate removal, and wildfire threat abatement. This determination is based upon measures contained in the Project Description, implementation of the WFMP, and Standard Operating Procedures promulgated specifically to reduce impacts of Army actions on listed plant species.

Impacts to bat roosting habitat would be minimized by the construction of six fence units over approximately 9,308 hectares (23,000 acres) on PTA and the subsequent removal of ungulates from these areas. These fence units contain approximately 5,406 hectares (13,359 acres) of treeland communities providing potential available roosting habitat for Hawaiian hoary bats, and the existing fenced portions of the Kipuka Alala contain approximately 1,547 hectares (3,823 acres) of treeland communities. Thus, proposed and existing fence units will contain approximately

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6,953 hectares (17,181 acres) of treeland vegetation. (Note that existing fence units for Kipuka Kalawamauna and Kipuka Alala will be encompassed within the western portion of the new, proposed fence unit.) Feral ungulates will be removed in the proposed fence units through public hunting programs and contracted aerial control, to enhance survival and regeneration of native vegetation. In particular, the western fence unit when completed will enclose a large, contiguous area that contains the best-quality remaining native woodland and shrubland habitats on the installation, including approximately 5,190 hectares (12,825 acres) of treeland vegetation providing potential available roosting habitat for bats. The removal and continued control of non-native ungulates in fence units will contribute toward the restoration of damaged vegetation, and will enhance the survival and regeneration of treeland roosting habitat for bats.

Locations of all fence alignments will be determined by the PTA Implementation Team, with approval of the Army and the Service. In addition, the PTA Implementation Team, will develop management protocols for rare plant conservation, augmentation, and reintroduction; rodent and invertebrate control; and invasive plant control. Standard Operating Procedures will be revised to minimize the additional environmental impacts associated with SBCT Transformation and emphasize protection of the vegetation. All these measures will further enhance the foraging and roosting habitats used by bats.

Table 6. Area of treeland vegetation types where take of Hawaiian hoary bats is possible/likely, as measured indirectly by potential available roosting habitat, in the PTA action area (excluding the Keamuku Parcel).

Project Effects on Hawaiian Hoary Bats	Treeland Vegetation Destroyed/Degraded ¹ (hectares [acres])	Treeland Vegetation Maintained/Enhanced ² (hectares [acres])
Live-Fire and Wildfire (PTA) ³	19,966 (49,317)	--
[Impact Area]	[7,999 (19,766)]	--
Off-Road Maneuvers – High-Probability Area ⁴	956 (2,361)	--
Construction and Training Use of BAX and AALFTR ^{4,5}		
Construction and Maintenance of Fire breaks/Fuel breaks ⁴		
Fence Units ^{4,6}	--	6,953 (17,180)
Unfenced Palila Critical Habitat Areas	--	1,369 (3,382)
Fire Management Areas		
Total	19,966 (49,317)	8,321 (20,562)
Net Treeland Vegetation Destroyed or Degraded	11,645 (28,754)	--

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¹Cumulative impacts to existing treeland vegetation; includes subset effects associated with the Impact area, Off-Road Maneuvers, fire breaks/fuel breaks.

²Survival and regeneration of treeland vegetation enhanced through ungulate control.

³Excluding Keamuku Parcel.

⁴Additional impacts expected to occur in areas affected by live-fire and wildfire.

⁵Battle Area Course (BAX); Anti-Armor Live-Fire Tracking Range (AALFTR).

⁶Including fenced portions of Kipuka Alala.

⁷Undeterminable from information provided in the Transformation Biological Assessment.

Treeland vegetation trends should be monitored in military training areas, fence units, and Fire Management Areas outside the Impact Area. The Service considers monitoring as a term and condition necessary to evaluate the underlying assumptions made about the presence of bats and their use of roosting and foraging habitats. Such monitoring will provide a more specific measure of the protective adequacy of the Army's minimization measures and the terms and conditions of this biological opinion. Information gained from monitoring will be used to readjust strategies for avoiding and minimizing take of Hawaiian hoary bats in the action area. Monitoring also will collect valuable scientific data that would contribute to recovery of the Hawaiian hoary bat.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, local or private actions that are reasonably certain to occur within the area of action subject to consultation. Future Federal actions will be subject to the consultation requirements established in section 7 of the Act and, therefore, are not considered cumulative to the proposed action. According to the Transformation Biological Assessment, two non-Federal actions are reasonably certain to occur on lands adjacent to the PTA/Keamuku action area: a private residential development is planned at Waikii Ranch, and a State capital improvement project is planned by the Hawaii Department of Land and Natural Resources. No further information is available for the Waikii Ranch project. The State project will establish a fire break along a previously disturbed power line corridor that will connect to the northern PTA fire break. The direct and indirect impacts of vegetation destruction would be minimized by surveying the proposed fire break route for listed species; altering the route where necessary to avoid direct habitat impacts; limbing trees rather than removing them; and leaving a patchy mosaic of fuel-reduction cover types that will include native grasses, shrubs, and trees. The Service is unaware of any other future State, local, or private actions that are reasonably certain to occur within the action area covered in this biological opinion and that would not be subject to Army section 7 review.

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CONCLUSION

After reviewing the current status, the environmental baseline, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that implementation of the proposed action discussed herein is not likely to jeopardize the continued existence of any species covered in this biological opinion or adversely modify or destroy palila critical habitat. This conclusion is based on the following factors:

1. The Service anticipates that the direct and indirect effects of the proposed action will result in a decline in the number of Hawaiian hoary bats in the action area. This conclusion is based on the eventual, cumulative loss of all potential available treeland roosting habitat in the action area as a result of Legacy and SBCT Transformation training. However, the adverse effects of the proposed actions will be minimized by such measures as the construction of 9,307 hectares (23,000 acres) of new fence units, removal of ungulates, implementation of the WFMP, inclusion of Hawaiian hoary bat conservation and management into the Implementation Plan, and monitoring Hawaiian hoary bat presence and abundance.
2. The Service does not expect that Hawaiian hoary bats occur in large concentrations at PTA and only a small proportion of the bat's overall range on the island of Hawaii is likely to be affected by the proposed actions on the installation. This loss of bats at PTA is not likely to affect the status of the subspecies on Hawaii or throughout the State because this represents a small proportion of the Hawaiian hoary bat's overall range. The entire PTA/Keamuku action area comprises only about 13 percent of the bat's current range on Hawaii and approximately seven percent of its current State-wide range.
3. There will be direct and indirect adverse impacts to listed plant species from Legacy and Transformation training. Several measures have been included in this consultation to offset training impacts to plants. Approximately 9,307 hectares (23,000 acres) of fence units will be constructed and ungulates removed to allow natural habitat restoration and recruitment of these listed plant species. The Implementation Plan will address outplanting for each species to increase species distribution and abundance. In addition, the Implementation Plan will include: invasive plant and rodent control; dust study; buffers and new Standard Operating Procedures to minimize Army training on these species and their habitats.
4. All Legacy land-use and training activities in palila critical habitat will remain as currently stipulated under Army Regulations. However, the portions of Palila

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Critical Habitat Area B and Mauna Kea State Park located south of the planned realigned Saddle Road will be affected by future Transformation training activities. SBCT training action will include Stryker vehicles driving through these areas on dirt roads that will generate large amounts of dust that will accumulate on plant leaves. This dust deposition may reduce photosynthetic rates thereby reducing plant health and vigor. In addition, Transformation actions include an off-road maneuver training area adjacent to the southern border of Palila Critical Habitat Area B. Adverse effects of repetitive driving over dirt roads and open land by Strykers include: increased dust, opportunity for non-native plant encroachment and increase risk of fire due to additional training. To minimize the indirect effects of dust, invasive species and fire, adjacent to mamane/naio woodland, a 75-meter (246-foot) buffer will be situated along the southern boundary of Palila Critical Habitat Area B. In addition, the Implementation Team will develop, and the Army will implement, a study to determine the effect of dust on mamane/naio woodland from on-road vehicular dust accumulation. If it is determined that dust is detrimental to the woodland habitat then measures will be instigated such as gravel or palliatives on roadways to curtail dust generation and drift.

5. The WFMP has been finalized and fuel modification at PTA is currently underway. The WFMP addresses the methods and protocols necessary to control the frequency, intensity, and size of fires at PTA. This will include the construction of fuel breaks and fuel corridors that will help reduce the risk of a catastrophic loss of habitat and listed plants. Implementation of the Fire Danger Rating System is expected to significantly reduce the frequency and severity of wildland fires at PTA.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered

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to be prohibited taking under the Act, provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The measures described below are non-discretionary, and must be undertaken by the Army so that they become binding conditions in order for the exemption in section 7(o)(2) to apply. The Army has a continuing duty to regulate the activity covered by this incidental take statement. If the Army (1) fails to assume and implement the terms and conditions or (2) fails to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to any permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the Army must report the progress of the action and its impact on the Hawaiian hoary bat to the Service as specified in the incidental take statement (50 CFR § 402.14(I)(3)).

Sections 7(b)(4) and 7(o)(2) of the Act generally do not apply to listed plant species. However, limited protection of listed plants from take is provided to the extent that the Act prohibits the removal and reduction to possession of federally listed endangered plants or the malicious damage of such plants on areas under Federal jurisdiction, or the destruction of endangered plants on non-Federal areas in violation of State law or regulation or in the course of any violation of a State criminal trespass law (HRS 195D).

Amount or Extent of Take

The Service anticipates that take of Hawaiian hoary bats will occur in the form of direct take resulting in the death or injury of individual bats, harm due to significant loss of potential available treeland roosting habitat, and harassment by noise and ground disturbance. Take is anticipated to be incidental, and not the purpose of, the carrying out of otherwise lawful activities related to the military activities described in this biological opinion.

1. The Service anticipates that take of Hawaiian hoary bats will occur in the form of harm (due to the loss of habitat), harassment, and injury or death as a result of Army activities described in the biological opinion. Take in the action area will include all bats associated with the loss of potential available treeland roosting habitat. Based on the past fire history of PTA, we anticipate that an average 254 hectares (628 acres) of all habitat types may burn per year outside the Impact Area, of which approximately 97 hectares (240 acres) consist of treeland vegetation providing suitable roosting habitat for bats. Therefore, the Service anticipates the proposed action will result in the take of all bats associated with the loss of no more than 97 hectares (240 acres) per year of treeland habitat outside the Impact Area for the first 5 years after this biological opinion is finalized. After the first 5 years, we anticipate that the effective implementation of the WFMP will result in the take of all bats

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associated with the loss of no more than 48 hectares (119 acres) per year of treeland habitat outside the Impact Area. We further anticipate that no more than 1,345 hectares (3,324 acres) of treeland habitat will be cumulatively lost in the action area outside the Impact Area and the high-probability Stryker off-road maneuver area. In addition, over time all treeland habitat within the Impact Area and the high-probability Stryker off-road maneuver area, which together comprise approximately 8,955 hectares (22,127 acres) of treeland habitat, will be lost. Take will be indirectly monitored for this incidental take statement by determining the area, in hectares, of treeland roosting habitat that is destroyed each year on PTA outside the Impact Area.

Effect of the Take

The Service determines that the level of take quantified above is not likely to jeopardize the continued existence of the Hawaiian hoary bat or result in the destruction or adverse modification of palila critical habitat.

Reasonable and Prudent Measures

The reasonable and prudent measures given below, with their implementing terms and conditions, are designed to minimize the impacts of incidental take that might otherwise result from the proposed actions. If, during the course of the actions, the level of incidental take is exceeded, the action agency is required to reinitiate consultation and review the reasonable and prudent measures provided in this biological opinion. In addition, the Army must cease the activities that caused the taking; must immediately provide an explanation of the causes of the taking; and must review with the Service the need for possible modification of the reasonable and prudent measures. The Army will offset unavoidable impacts through the implementation of the conservation measures as described in the Project Description.

The Service believes the following Reasonable and Prudent Measures are necessary and appropriate to minimize incidental take of Hawaiian hoary bat. The measures described below are non-discretionary and must be implemented.

1. Minimize direct and indirect effects on survival and reproduction of Hawaiian hoary bats in the action area.
2. Minimize loss and degradation of roosting habitat for Hawaiian hoary bats in the action area.
3. Minimize noise and ground disturbance to Hawaiian hoary bats associated with military activities in the action area.

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Terms and Conditions

In order to be exempt from the prohibitions section 9 of the Act, the Army must comply with the following terms and conditions to avoid or minimize take of Hawaiian hoary bats in the action area. The terms and conditions implement the reasonable and prudent measures described above and outline reporting and monitoring requirements. These terms and conditions are non-discretionary.

Terms and conditions that implement reasonable and prudent measure (1) are as follows:

1. Minimize direct and indirect effects on the survival and reproduction of Hawaiian hoary bats in the action area.

- 1.1. Avoid construction activities for the Battle Area Course, Anti-Armor Live-Fire Tracking Range, and fuel modification areas during the breeding season of the Hawaiian hoary bat (April through August), and particularly during the peak lactation period (June through August), to the maximum extent practicable.**
- 1.2. Develop and implement a species conservation plan for the Hawaiian hoary bat as part of the PTA Implementation Plan to address implementation of these terms and conditions. The bat conservation plan shall be determined in consultation with the Service, the State, and the PTA Implementation Team, which shall include a Service-approved team of bat experts.**
- 1.3. Dedicate one or more of the Army Natural Resources staff to become familiar with the biology and habitat requirements of the Hawaiian hoary bat, including appropriate monitoring techniques. This individual will become the point of contact for all bat issues and concerns.**
- 1.4. Report any incidental take of Hawaiian hoary bats by notifying the Service within three working days if any take of Hawaiian hoary bats occurs, or upon finding a dead, injured, or sick bat. Provide reports of incidental take to the Service's Pacific Islands Fish and Wildlife Office, P.O. Box 50088, Honolulu, HI 96850, (telephone 808/792-9400). Handle any dead specimens carefully to preserve biological material in the best possible state. The depository designated to receive specimens of Hawaiian hoary bats is the Bernice Pauahi Bishop Museum, 1525 Bernice Street, Honolulu, HI 96817 (telephone 808/547-3511). If the B.P. Bishop Museum declines to accession the specimens, the Army should contact the Service's Division of Law Enforcement in Honolulu, HI (telephone 808/541-2681, fax 808/541-3062) for instructions on disposition.**

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Terms and conditions that implement reasonable and prudent measure (2) are as follows:

2. Minimize loss and degradation of roosting habitat for Hawaiian hoary bats in the action area.
 - 2.1. Monitor the annual amount of incidental take, as measured indirectly by hectares of treeland vegetation destroyed outside the Impact Area, and provide an annual report of the results to the Service for assessment of whether the estimated annual level of take has been exceeded.
 - 2.2. Monitor trends in treeland vegetation cover in fence units and Fire Management Areas to determine the extent of enhanced survival and regeneration of tree species. Appropriate monitoring and reporting protocols will be developed by the Implementation Team with assistance from bat ecologists. These measures shall be incorporated into the Implementation Plan.
 - 2.3. Monitor trends in numbers of Hawaiian hoary bats present in the action area. Appropriate monitoring and survey methodologies plus reporting protocols will be developed by the Implementation Team with assistance from bat ecologists. These measures shall be incorporated into the Implementation Plan.
 - 2.4. The Army will notify the Service within 24 hours of any instance in which training was not conducted in accordance with the WFMP and a wildfire occurred that impacted bat foraging or roosting habitat outside of the Impact Area.
 - 2.5. Determine the number of bats per area of treeland roosting habitat in selected vegetation types within the action area, in order to refine take estimates measured indirectly by the amount of lost roosting habitat and to determine when those take levels are exceeded. Appropriate research methodologies shall be developed by the PTA Implementation Team and incorporated as part of the PTA Implementation Plan.
 - 2.6. The Implementation Team shall address enhancement and restoration of habitat utilized for bat roosting to offset any significant event (such as a wildfire or training mishap) that results in woodland or shrubland habitat degradation.
 - 2.7. Develop and implement a species conservation plan for the Hawaiian hoary bat as part of the PTA Implementation Plan to address implementation of these terms and conditions. The bat conservation plan shall be determined in consultation with the Service, the State, and the PTA Implementation Team, which shall include a Service-approved team of bat experts. The PTA Implementation Team will review the progress of the Implementation Plan annually, and make recommendations to the Army regarding needed adaptive management changes to the Hawaiian hoary bat conservation plan. The Service will have final approval regarding changes to the Implementation Plan to ensure they meet the goals of this consultation.
 - 2.8. Components of the Hawaiian hoary bat conservation plan must include, but are not limited to, the following: (a) time frame for completing its implementation

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- phase; (b) identification of priority areas and actions; (c) definitions of success for bat population and habitat management; (d) methods for bat population and habitat management; (e) methods for monitoring, data tracking, analysis, and feedback; (f) a gross-scale estimate of the maximum acceptable decline in trends of bat population numbers and/or loss of available treeland roosting habitat that will trigger development and implementation of additional minimization measures not contained in the terms and conditions of this biological opinion; and (g) a cost estimate for plan implementation. The PTA Implementation Plan shall follow the conceptual model and protocols developed for the Makua Implementation Plan.
- 2.9. The PTA Implementation Team will assist in identifying minimization measures needed to offset impacts to the Hawaiian hoary bat in the action area. Additional surveys of the action area are likely to reveal the presence of bats in places not previously documented at PTA and the Keamuku Parcel. If such is the case, changes in species status will be considered when appropriate stabilization sites and actions are identified by the PTA Implementation Team.
 - 2.10. Within six months from the issuance date of this biological opinion, Army, State and Service biologists shall meet and review the status of the Hawaiian hoary bat as part of the PTA Implementation Plan. The PTA Implementation Team shall determine what, if any, additional conservation actions shall be implemented to reduce the potential decline of bats due to military actions in the action area. The Army will implement any determined urgent actions within one year from the issuance date of the biological opinion in order to minimize the risk of species loss prior to the finalization of the PTA Implementation Plan.
 - 2.11. The PTA Implementation Plan will be completed by December 31, 2005, with conservation measures intended to offset impacts to the Hawaiian hoary bat beginning within six months of the completion date of the Implementation Plan.
 - 2.12. Provide all annual reports and monitoring results to the Service's Pacific Islands Fish and Wildlife Office, P.O. Box 50088, Honolulu, HI 96850, no later than six months after the end of the previous fiscal year's activities.

Terms and conditions that implement reasonable and prudent measure (3) are as follows:

3. Minimize noise and ground disturbance to Hawaiian hoary bats resulting from military activities in the action area.
 - 3.1. Include Hawaiian hoary bat in the Environmental Awareness Program to inform installation users of the need to avoid and minimize impacts to bats on PTA/Keamuku.
 - 3.2. Develop and implement a species conservation plan for the Hawaiian hoary bat as part of the PTA Implementation Plan to address implementation of these terms and conditions. Components of the bat conservation plan are further described under term and condition 2.11 and must include, but are not limited to,

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identification and implementation of appropriate training restrictions to avoid or minimize take (*i.e.*, harm and harassment) of Hawaiian hoary bats when feasible. The bat conservation component of the Implementation Plan shall be determined in consultation with the Service, the State, and Service-approved bat experts.

The Service concludes that all Hawaiian hoary bats associated with the loss of treeland vegetation in PTA will be incidentally taken as a result of the proposed action. The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. If during the course of the action the level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and a review of the reasonable and prudent measures. The Army must immediately provide an explanation of the cause of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Endangered Species Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. In order for the Service to be kept informed of actions that avoid or minimize adverse effects, or benefit listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

1. Pursue additional funding and partnership opportunities to implement additional surveys and research needed to better understand the Hawaiian hoary bat's abundance and distribution, life history and habitat ecology, and response to management. Such research would produce valuable information that would contribute to the bat's conservation and recovery. For example, radio-telemetry studies on habitat selection by Hawaiian hoary bats in the action area would provide information on what characteristics bats use to select roosting sites, in particular, if bats at PTA are roosting in both trees and shrubs.
2. Reforest native treeland communities in fence units to provide roosting habitat for the Hawaiian hoary bat.
3. Participate as an active member of the public-private Hawaiian Hoary Bat Research Cooperative sponsored by the Service, the Hawaii Department of Land and Natural Resources - Division of Forestry and Wildlife, and Bat Conservation International.

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4. Fence all palila critical habitat on PTA with subsequent removal of ungulates from fenced areas.
5. If experiments to determine seed predation by rodents show rodents are eating mamane seeds, conduct a large scale rodent control program at appropriate sites on the PTA to reduce rodent numbers. Monitor effects of large scale rodent control on mamane productivity and mamane/naio forest regeneration.
6. Assist the State Department of Land and Natural Resources - Division of Forestry and Wildlife with the repair and maintenance of the Mauna Kea Forest Reserve fence on the northern boundary of PTA.
7. The Army should devise and test different methods for converting disturbed habitat to native habitats such as prescribed burns versus herbicide applications (aerial spraying, pony-pack spraying and/or hand-removal) to rid large areas of *Pennisetum setaceum*.
8. The Army should establish protocols for hydromulching or other large-scale native plant seeding to be used in native habitat restoration efforts.
9. Increase nursery facilities on PTA with the goal of creating a production-scale facility that is capable of producing large quantities of native plant materials for use in revegetation projects undertaken by Integrated Training Area Management staff.
10. All roads on PTA should be paved or graveled to eliminate dust generated from on-road maneuvers and activities.
11. The same level of conservation actions should be conducted for Federal candidate plant species and other plant species of concern as for threatened and endangered plant species.
12. The Army should work with off-site land managers/landowners to develop partnerships that would allow for reintroduction of threatened and endangered plant species on their lands.

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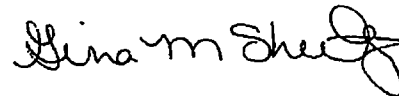
REINITIATING-CLOSING STATEMENT

This concludes formal consultation on this action. If implementation of conservation actions have not been initiated by the end of calendar year 2005, then the Army will be required to reinitiate formal consultation to allow for re-evaluation of project effects within the context of the environmental baseline for the plant and animal species covered in this biological opinion. As required in 50 CFR § 402.16, reinitiation of consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: 1) the amount or extent of incidental take is exceeded; 2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; 3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or 4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation of consultation.

The Army will coordinate with the Service if a fire due to military activities or actions occurs outside of the action area as described in this biological opinion. Similarly, the Army will reinitiate consultation if a fire due to military activities or actions affects any known occurrence of an federally listed species requiring population augmentation (determined by the Implementation Team) prior to its being outplanted to ensure the species is not in jeopardy of extinction. As stated in the Conclusion of the Effects of the Action on Listed Species (above), the Service's finding of no jeopardy is based in large part on the conservation measures built into the project by the Army. Should there be a failure to carry out any or all of the described measures, or if the measures are not effective, or if these measures are modified in any way beyond that accepted through the PTA Implementation Team review process, reinitiation of consultation will be required.

If you have any questions regarding this biological opinion, please contact Ms. Patrice Ashfield of my staff at (808) 792-9400.

Sincerely,



Gina M. Shultz
Acting Field Supervisor

Attachments

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